

What is claimed is:

1. A device for closing an opening in a blood vessel comprising:

- a) a cannula;
- b) a first wire group assuming a first shape in said cannula;
- c) a second wire group assuming a second shape in said cannula; and
- d) a wire fixation device operably coupled to said first and second wire groups;

wherein

positions of said first wire group and said second wire group are independently adjustable,

said first wire group is deployable from said cannula into an interior region of the blood vessel whereby said first wire group assumes a third shape different from said first shape,

said first wire group is retractable to a desired position in contact with an intimal surface of the blood vessel around the opening,

said second wire group is deployable from said cannula whereby said second wire group assumes a fourth shape different from said second shape,

said second wire group is movable to a desired position in contact with an adventitial surface of the blood vessel around the opening, and

said fixation device is deployable from said cannula and is adapted to affix said first and second wires in their desired positions to thereby effectuate closure of the opening in the blood vessel.

2. The device according to claim 1, wherein:

said fixation device comprises a lock bead having a passageway through which pass said first wire group and said second wire group.

3. The device according to claim 2, wherein:

said lock bead is positioned adjacent a distal portion of said second wire group, and said first and second wire groups have sections that protrude proximally from said lock bead, wherein said sections are cut and bent back toward their distal ends to affix the positions of said first and second wire groups relative to one another.

4. The device according to claim 1, wherein:

said first and second wire groups assume different configurations when deployed from said cannula.

5. The device according to claim 4, wherein:

said different configurations include distal portions of said first and second wire groups having a substantially planar shape.

6. The device according to claim 5, wherein:

said distal portions are orthogonally disposed with respect to a longitudinal axis of said cannula.

7. The device according to claim 1, wherein:

said first and second wires are formed from a metal.

8. The device according to claim 7, wherein:

said metal comprises a metal alloy.

9. The device according to claim 8, wherein:

said metal alloy comprises an elastic shape memory alloy.

10. The device according to claim 9, wherein:

said elastic shape memory alloy comprises one of nitinol and ELGILOY.

11. The device according to claim 7, wherein:

said metal comprises stainless steel.

12. The device according to claim 1, wherein:

said first and second wires are formed from a polymeric material.

13. A method for closing an opening in a blood vessel comprising:

providing a device having a cannula that holds a first wire group, a second wire group, and a wire fixation device, wherein positions of said first wire group and said second wire group are independently adjustable;

positioning said cannula at said opening and deploying said first wire group from said cannula into an interior region of the blood vessel;

retracting said first wire group to a desired position in contact with an intimal surface of the blood vessel around the opening;

deploying said second wire group from said cannula and moving said second wire group to a desired position in contact with an adventitial surface of the blood vessel around the opening; and

affixing said first and second wire groups in their desired positions to thereby effectuate closure of the opening in the blood vessel.

14. The method according to claim 13, wherein:

the device includes a fixation device stored in the cannula, and

further comprising deploying said fixation device from said cannula, and adapting said fixation device to affix said first and second wire groups in their desired positions.

15. The method according to claim 14, wherein:

said fixation device comprises a lock bead having a passageway through which pass said first and second wire groups.

16. The method according to claim 16, further comprising:

positioning said lock bead adjacent a distal portion of said second wire group such that said first and second wire groups have sections that protrude proximally from the lock bead; and

cutting said sections and bending said sections back toward their distal ends to thereby affix the positions of said first and second wire groups relative to one another.

17. The method according to claim 13, wherein:

said first and second wire groups assume different configurations when deployed from said cannula.

18. The method according to claim 17, wherein:

said different configurations include distal portions of said first and second wire groups having a substantially planar shape.

19. The method according to claim 18, wherein:

said distal portions are orthogonally disposed with respect to a longitudinal axis of said cannula.

20. The method according to claim 13, wherein:

said first and second wire groups are formed from a metal.

21. The method according to claim 20, wherein:

said metal comprises a metal alloy.

22. The method according to claim 21, wherein:

said metal alloy comprises an elastic shape memory alloy.

23. The method according to claim 22, wherein:

said elastic shape memory alloy comprises one of nitinol and ELGILOY.

24. The method according to claim 20, wherein:

said metal comprises stainless steel.

25. The method according to claim 13, wherein:

said first and second wires are formed from a polymeric material.